

CLAIMS

1. A heat exchanger block comprising
2 at least two heat exchangers each consisting of a pair of longitudinal
4 headers with tubes extending between said headers, adjacent heat
exchangers being detachably connected at adjacent ends of their
6 headers wherein
one of said adjacent headers includes a recessed portion in the
8 adjacent end,
the other of said adjacent headers includes a flange receivable in
10 said recessed portion of said one header, and
matching holes extend through said flange and said one header end;
a fastener extending through said matching holes in the ends of at least one
12 set of adjacent headers.
2. The heat exchanger block of claim 1, wherein at least some of
2 said headers are aluminum cast parts.
3. The heat exchanger block of claim 1, further comprising shroud
2 attachments along a longitudinal wall of at least one of the longitudinal headers.
4. The heat exchanger block of claim 1, further comprising an
2 intermediate insert between the tubes of said adjacent headers, said insert having
a low thermal conductivity.

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2 5. The heat exchanger block of claim 1, wherein the fastener
extends between the front and back of the heat exchanger block.

2 6. The heat exchanger block of claim 1, wherein said matching
holes are each longitudinal with an oblong cross-section in a plane perpendicular
to the longitudinal direction of said holes.

2 7. The heat exchanger block of claim 6, wherein said oblong
cross-sections each have a major dimension, and said major dimension of one
oblong cross-section is transverse to said major dimension of the other oblong
4 cross-section.

2 8. The heat exchanger block of claim 1, wherein said heat
exchanger block is a cross-flow heat exchanger block in which the headers are
arranged on two vertically-aligned rows.

2 9. The heat exchanger block of claim 1, wherein adjacent
headers jointly define a substantially longitudinally extending outer profile, and said
flange does not extend substantially outside said outer profile.

2 10. The heat exchanger block of claim 1, wherein said flat tubes
together with fins define a core for each heat exchanger, and said cores of all of the
heat exchangers are substantially aligned on at least one side in a plane.

2 11. The heat exchanger block of claim 10, wherein said plane is
substantially vertical.

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2 12. The heat exchanger block of claim 10, wherein said flange
extends substantially parallel to said plane.

2 13. The heat exchanger block of claim 1, further comprising fan
mounting arms, and arm attachments along a longitudinal wall of at least one of the
longitudinal headers.

2 14. The heat exchanger block of claim 1, further comprising
a first flange on one of said heat exchangers and a second flange on a
second of said heat exchangers, said flanges including aligned holes;
4 a connector extending through said aligned holes in the longitudinal
direction of the headers.

2 15. The heat exchanger block of claim 14, wherein said connector
permits different heat-related length changes between said first and second
flanges.

2 16. The heat exchanger block of claim 1, further comprising a
shape-mated joint between at least one pair of adjacent heat exchangers.

2 17. The heat exchanger block of claim 16, wherein said shape-
mated joint secures said one pair of adjacent heat exchangers against relative
movement in the longitudinal direction of the headers and permits relative
4 movement in a direction transverse to said longitudinal direction.

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18. A heat exchanger block comprising
2 at least two heat exchangers each consisting of a pair of longitudinal
headers with tubes extending between said headers, adjacent heat
4 exchangers being detachably connected at adjacent ends of their
headers wherein
6 one of said adjacent headers includes a recessed portion in the
adjacent end,
8 the other of said adjacent headers includes a flange receivable in
said recessed portion of said one header, and
10 matching holes extend through said flange and said one header end,
at least some of said headers being aluminum cast parts;
12 a fastener extending through said matching holes in the ends of at least one
set of adjacent headers; and
14 shroud attachments along a longitudinal wall of at least one of the
longitudinal headers.